

# **PROPOSED ETHANOL PROJECT ON MAUI: ECONOMIC AND FISCAL IMPACTS FOR VARIOUS TAX-INCENTIVE OPTIONS**

by  
Decision Analysts Hawai'i, Inc.

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## **1. INTRODUCTION**

- a. The following pages summarize the economic and fiscal impacts of the ethanol plant proposed by Maui Ethanol LLC, assuming various tax-incentive options.
- b. The material was prepared for the State in order to:
  - 1) Provide a preliminary assessment of likely economic and fiscal impacts of the proposed ethanol plant, conditioned on assumed combinations of tax-incentives.
  - 2) Obtain a letter from the State clarifying the combination of tax-incentives that the State Administration is willing to support.
  - 3) If the information is insufficient for the Administration to commit to a combination of tax incentives, then to obtain guidance on what additional analysis might be needed.

## **2. PROPOSED ETHANOL PLANT**

- a. Location and intended market: Maui
- b. Development Cost: \$14.04 million.
  - 1) Land Cost: \$700,000.
  - 2) Construction and construction financing: \$12.28 million (qualifying investment).
  - 3) Rolling stock, tools, supplies, etc.: \$1.06 million.
- c. Rated Capacity: 7.25 million gallons of ethanol per year.
- d. Annual Production:
  - 1) Ethanol: about 6.25 million gallons per year (86% of capacity).
  - 2) E10/Gasohol: about 62.48 million gallons per year.

### 3. EXISTING ETHANOL TAX INCENTIVES

#### a. State

##### 1) Ethanol Producer Tax Credit:

###### a) Amount = the lesser of:

- \$300,000 for each 1 million gallons in capacity (30¢/gallon).  
= \$2.1 million per year (\$300,000 x 7 million gallons).
- 30% of investment = \$3.684 million per year (30% x \$12.28 million) (does not apply).

###### b) Effective Rate:

- 29¢ per gallon of capacity (\$2.1 million ÷ 7.25 million gallons).
- 33.6¢ per gallon of production (\$2.1 million ÷ 6.25 million gallons).

###### c) Duration of payments: 8 years if the qualifying investment is under \$50 million; 10 years if over \$50 million.

###### d) Total Payments: \$16.8 million (\$2.1 million x 8 years).

###### e) Refundable tax credit paid after filing income tax return, thereby delaying the payment until the following year.

###### f) Industry Limits:

- Up to 40 million in capacity built before 1/1/2012.
- Up to \$12 million per year (30¢/gallon x 40 million).
- Up to \$96 million if the full amount is paid over 8 years (or more if the duration is 10 years for some plants).

##### 2) E10/Gasohol Excise Tax

###### a) Exempt (0%) through 2006.

###### b) 4% tax on sales after 2006 (the exemption sunsets on 12/31/06).

#### b. Federal

##### 1) Ethanol Producer Tax Credit: 10¢ per gallon with assumed expiration in 2010.

##### 2) E10/Gasohol Fuel-Tax Exemption

###### a) Federal fuel taxes reduced by 5.1¢ per gallon until 2007.

###### b) Same rate assumed for subsequent years.

#### 4. FIGURES: SUMMARY OF ECONOMIC AND FISCAL IMPACTS

- a. For four tax-incentive options, the economic and fiscal impacts are summarized in two figures containing a total of three plots:
  - 1) Net Economic Benefits include the estimated net change in (1) payroll, (2) profits that remain in Hawai'i, and (3) State and County taxes other than those paid out of payroll and profit. The scope includes all direct and indirect economic activities affected by the construction and operation of the ethanol plant.
  - 2) Fiscal Impacts include the estimated net change in State and County revenues (i.e., the change in revenues less the change in expenditures). Revenues include taxes on additional economic activity generated by the ethanol plant. Expenditures include tax subsidies as well as outlays for residents supported by new jobs.
  - 3) Employment includes the estimated net change in employment, covering all direct and indirect jobs in Hawai'i (i.e., the jobs include those created by the increase in economic activity and those lost due to tax subsidies).
- b. Table 1 summarizes:
  - 1) The data for the plots.
  - 2) The present values of the (1) net benefits and (2) the net revenues to the State and County.
- c. The proposed ethanol plant will provide additional benefits that are not conveyed by the plots and Table 1:
  - 1) Enhanced economic health and survival of the large HC&S sugarcane plantation on Maui (900+ jobs, 37,000 acres). HC&S will sell its entire production of molasses as the feedstock for the ethanol plant.
  - 2) The likelihood of increased economic activity due to future investment to (1) grow and crush sugarcane to use as an additional feedstock, and (2) expand ethanol production. This will overcome the limited supply of molasses on Maui.
  - 3) A modest increase in energy self-sufficiency for Hawai'i.
  - 4) Cleaner air because E10/gasohol is a cleaner fuel than is gasoline.

## 5. TAX-INCENTIVE OPTIONS

### a. Option 1: Existing Tax Incentives

- 1) This option reflects the existing State and Federal tax incentives.
- 2) Comments:
  - a) In Figures 1-a and 1-b, the first two years cover construction activity.
  - b) For year 2006, the spike in benefits reflects the one-year delay in the State's payment of the ethanol producer tax credit: the full benefit of the ethanol operation applies, with no loss of benefits from reduced government operations and programs. From 2007 to 2014, benefits are lower because of the tax subsidy and the cost to government operations and programs.
  - c) For year 2006, the negative spikes in net revenues and in employment reflect the effects of the State E10/Gasohol excise tax exemption, which expires at the end of 2006. This tax subsidy creates a substantial drain on the State government and a loss of employment supported by government operations and programs. Since most of the tax subsidy translates into increased profits to fuel distributors, there is a transfer of benefits from the State government to fuel distributors. The expenditures of these profits will increase employment, but not sufficiently to offset the loss of jobs related to government operations and programs.
  - d) The small dip in benefits in year 2011 reflects the expiration of the Federal Ethanol Producer Tax Credit. In practice, however, the dip will be less pronounced since payment of the credit will be delayed and spread out over a number of years.
  - e) The 2015 increases in benefits, net tax revenues, and jobs reflect the expiration of the State Ethanol Producer Tax Credit. Nevertheless, without this credit the Project would not be feasible.

### b. Option 2: Early Sunsetting of the State E10/Gasohol Excise Tax Exemption

- 1) Option 2 is the same as Option 1 except that the sunsetting of the State E10/Gasohol Excise Tax Exemption occurs by 12/31/2005 instead of one year later. Thus, in year 2006, State E10/Gasohol would no longer be exempt from the 4% excise tax.
- 2) Comments:
  - a) For this option, the sunset date for the exemption is moved up because the exemption is expensive and, with the State's new Ethanol

nol Producer Tax Credit, it is not needed to attract ethanol producers to Hawai'i.

- b) The early sunseting of the exemption greatly reduces the cost to the State (compare Figures 1-b and 2-b, year 2006).
- c) Even without this State exemption, fuel distributions will receive a premium for selling gasohol and will release higher profits. These benefits are due to the Federal E10/gasohol fuel-tax exemption.

**c. Option 3: Early Sunseting + Decrease State Ethanol Producer Tax Credit to 25¢/gallon**

- 1) This option is the same as Option 2 except that the State Ethanol Producer Tax Credit is reduced from 30¢ per gallon to 25¢ per gallon.
  - a) Annual Tax Credit: \$1.75 million per year (25¢/gallon x 7 million gallons).
  - b) Total Tax Credit: \$14 million (\$1.75 million/year x 8 years).
  - c) Savings to State:
    - Annual: \$350,000 per year (\$2.1 million/yr – \$1.75 million/yr).
    - Total: \$2.8 million ( \$350,000/yr x 8 years).
  - d) Industry Limits:
    - Up to \$10 million per year (25¢/gallon x 40 million), or a savings of \$2 million per year compared to the current limit (\$12 million/yr – \$10 million/yr).
    - Up to \$80 million if the full amount is paid over 8 years, or a savings of \$16 million compared to the current limit (\$96 million – \$80 million).
- 2) Comments:
  - a) The reduced tax subsidy is more affordable to the State, and results in higher benefits and employment.
  - b) A tax credit of 25¢ per gallon of ethanol:
    - May be feasible for an ethanol plant that has a guaranteed market in Hawai'i.
    - But may not be feasible for an ethanol plant that will depend upon exporting the ethanol outside Hawai'i.
  - c) A tax credit as low as 20¢ per gallon may jeopardize the feasibility of an ethanol plant even with a guaranteed market in Hawai'i.

**d. Option 4: Early Sunsetting + Limit the Credit to the Qualifying Investment**

- 1) This option is the same as Option 3 except that the tax credit is limited to the amount of the qualifying investment by reducing the amount of the credit.
  - a) Tax Credit:
    - Total: \$12.28 million (qualifying investment).
    - Annual: \$1.535 million per year ( $\$12.28 \text{ million} \div 8 \text{ years}$ ).
    - Per Million Gallons of Capacity: \$219,286 ( $\$1.535 \text{ million per year} \div 7 \text{ million gallons}$ ).
    - Per Gallon: 21.93¢ per gallon.
  - b) Savings to State:
    - Annual: \$565,000 per year ( $\$2.1 \text{ million/yr} - \$1.535 \text{ million/yr}$ ).
    - Total: \$4.52 million ( $\$565,000/\text{yr} \times 8 \text{ years}$ ).
  - c) Approximate Industry Limits:
    - Annual: up to \$8.771 million per year (21.93 ¢/gallon  $\times$  40 million), or a savings of \$3.229 million per year compared to the current limit ( $\$12 \text{ million/yr} - \$8.771 \text{ million/yr}$ ).
    - Total: up to \$70.171 million if the full amount is paid over 8 years, or a savings of \$25.829 million compared to the current limit ( $\$96 \text{ million} - \$70.171 \text{ million}$ ).
- 2) Comments:
  - a) As assumed, this option is more affordable to the State and results in greater benefits.
  - b) But it weakens the financial feasibility of the proposed ethanol plant, thereby lowering the probability that it will be built.
  - c) Also, the nature of the limit creates an incentive to install more expensive equipment that will (1) increase the amount of the tax credit while (2) reducing operating labor and other costs.
  - d) Thus, in practice, this option may be as expensive to the State as Option 3, or even more expensive. And because of the higher tax subsidy combined with reduced labor and payroll, the benefits during operations may be less than those shown in Figure 4-a or even Figure 3-a.

**e. Other Options (not plotted)****1) Early Sunsetting + Fewer Years of Tax Credits**

- a) A variation of Option 4 would be to keep the credit at 30¢ per gallon, except that the tax credit would be limited to the qualifying investment by reducing the years of payment.
  - The tax credit is kept at \$2.1 million per year.
  - But the duration is shortened to about 6 years ( $\$12.28 \text{ year of qualifying investment} \div \$2.1 \text{ million per year}$ ).
  - The savings: \$4.52 million ( $\$16.8 \text{ million} - \$12.28 \text{ million}$ ).
  - Industry Limits:
    - Annual: remains at about \$12 million per year ( $30¢/\text{gallon} \times 40 \text{ million}$ )
    - Total: about \$72 million if the full amount is paid over 6 years, or a savings of \$24 million compared to the current limit ( $\$96 \text{ million} - \$72 \text{ million}$ ).

**b) Comments:**

- The graphs would be similar to those shown in Figures 2-a and 2-b, except that steady state would be reached two years earlier (in 2013 instead of 2015).
- The first three comments discussed for Option 4 would apply.
- Thus, in practice, this option may be as expensive to the State as Option 2. And because of the reduced labor and payroll, the benefits during operations may be less than those shown in Figure 2-a.

**2) Limit on Annual Tax-Credits for Individual Ethanol Plants**

- a) This option assumes that the State will impose tax-credit limits on individual ethanol plants. The limit can be imposed on qualifying capacity or on the amount of the tax credit.
- b) For example, tax credits for an ethanol plant might be limited to an annual capacity of 10 million gallons, or tax credits of \$3 million per year ( $30¢/\text{gallon} \times 10 \text{ million gallons/yr}$ ).
- c) Comments:
  - For the industry as a whole, this option will provide an incentive to build a large number of small ethanol plants

instead of a small number of large ones. Expensive plants (i.e., over \$50 million) would not be built. Thus, no plant would qualify for 10 years of tax credits.

- With a large number of small plants, there may be little or no cost savings to the State since the tax credits could still reach the maximum of \$12 million per year.
- For the proposed Maui ethanol plant, which is a comparatively small plant, the economic and fiscal impacts would be the same as plotted in (1) Figures 1-a and 1-b if no other incentives are changed, or (2) Figures 2-a and 2-b if the excise-tax exemption sunsets early.

### 3) Lower Industry Limits

- a) This option assumes that industry limits will be reduced in order to insure that the State can afford the tax credits for ethanol production in Hawai'i. The limit can be imposed on qualifying capacity or on the amount of the tax credit.
- b) For example, the industry limits might be reduced 25% to the following
  - Up to 30 million gallons in capacity built before 1/1/2012
  - Up to \$9 million per year (30¢/gallon x 30 million), or a savings of \$3 million per year compared to the current limit (\$12 million/yr – \$9 million/yr).
  - Up to \$72 million is the full amount if paid over 8 years, or a savings of \$24 million compared to the current limit (\$96 million – \$72 million).
- c) Comments:
  - Under this option, the economic and fiscal impacts of the proposed Maui ethanol plant will be the same as plotted in Figures 1-a and 1-b, or Figures 2-a and 2-b if the excise tax exemption sunsets early.
  - However, fewer ethanol plants may be built, or some may be reduced in capacity.



**6. TABLE : SCOPE OF ANALYSIS**

The scope of the analysis is summarized below and illustrated in Appendix Table A-1 for Tax-incentive Option 1.

- a. The first five columns of Table A-1 correspond to phases of activity.
  - 1) Column 1 covers Construction and Related Activities.
  - 2) Subsequent columns cover Operations and Related Activities for four combinations of tax incentives (A through B) that reflect changes over time as certain incentives come into effect or expire.
- b. The Assumptions (pp. 1 – 3) cover:
  - 1) The Period for each column.
  - 2) State and Federal Tax Incentives for ethanol and E10/gasohol.
  - 3) Fuel Prices and Taxes per gallon for gasoline, E10/gasohol, and ethanol.
  - 4) Production and Fuel Sales for ethanol and E10/gasohol.
- c. The analysis is grouped into five economic activities:
  - 1) Construction Activity (pp. 4 – 5)
  - 2) Ethanol Plant Operations (pp. 6 – 7)
  - 3) Refinery Operations (p. 8)
  - 4) Fuel Distributing + Ethanol Premium (pp. 9 – 10)
  - 5) Government Operations (pp. 11– 12)
- d. For each economic activity, the analysis covers:
  - 1) Direct economic and fiscal impacts associated with the specified activity.
  - 2) Indirect impacts associated with the purchases of goods and services by companies and families of employees (i.e., the ripple effect).
- e. The impacts cover changes in:
  - 1) Revenues and Sales
  - 2) Profit Reported in Hawai'i
  - 3) Employment
  - 4) Payroll
  - 5) Consumption Expenditures by Employees
  - 6) Residents Supported by New Jobs

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- 7) Fiscal Impact, State and County (tax and other revenues less support expenditures)
  - 8) Economic Benefits
  - f. The Summary of Economic and Fiscal Impacts (pp. 13 – 14) covers:
    - 1) The Net Change in Economic Activity (revenues and sales, employment, payroll)
    - 2) Fiscal Impacts
    - 3) Economic Benefits

## **7. NON-TRANSFERABILITY OF THE ANALYSIS TO OTHER ETHANOL PLANTS**

- a. The analysis presented in this document is unique to the ethanol plant proposed for Maui.
- b. The analysis is not transferable to an ethanol plant on O'ahu or another Neighbor Island, especially if it is a large plant that exports product to the mainland. The analysis is not transferable because: (1) another ethanol plant will differ in terms of capacity, development costs, operating costs, and source of feedstock; (2) the duration of tax credits may extend to 10 years; (3) different fuel prices may apply for a different island; (4) different County tax rates will apply; (5) different State taxes will apply for exported ethanol; (6) the Hawai'i/mainland mix of investors in the ethanol plant may differ; and (7) the Hawai'i/mainland mix of owners of fuel distributors may differ, or will differ in the case of exported ethanol.

Figure 1-a. Maui Ethanol Project, Tax-Option 1: Net Economic Benefits and Fiscal Impact

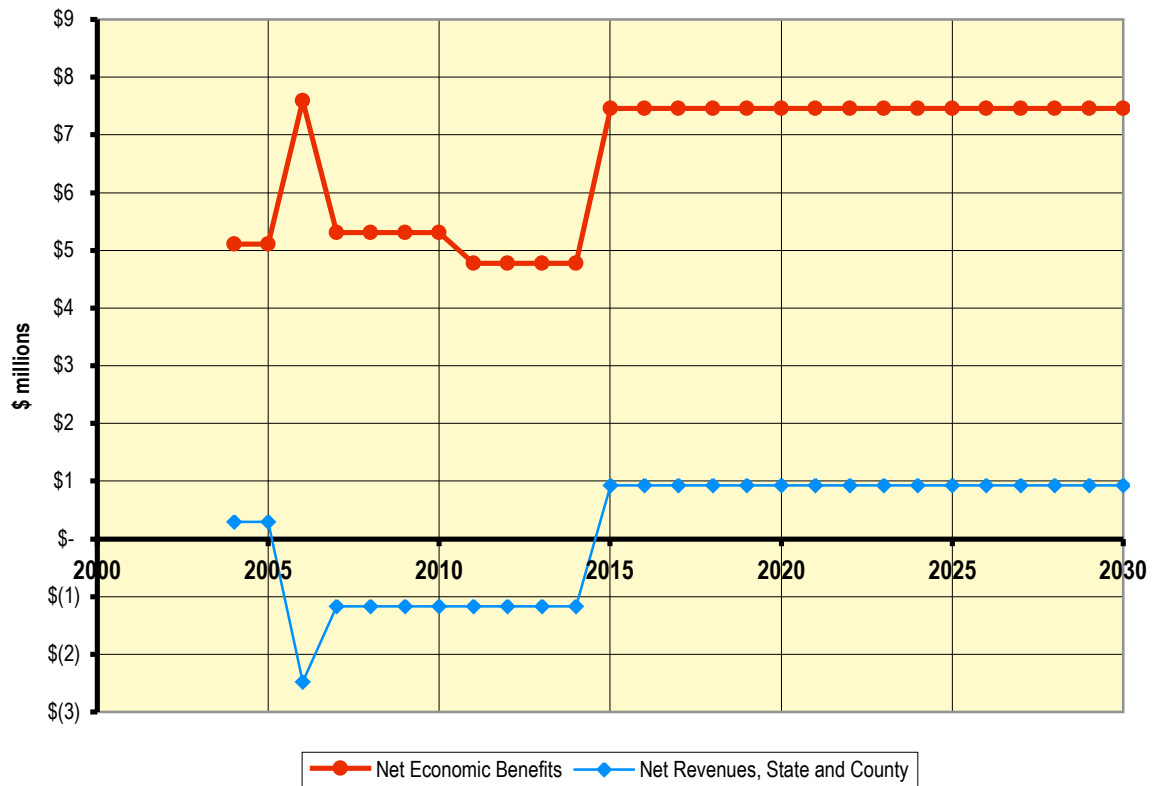


Figure 1-b. Maui Ethanol Project, Tax-Option 1: Impact on Employment

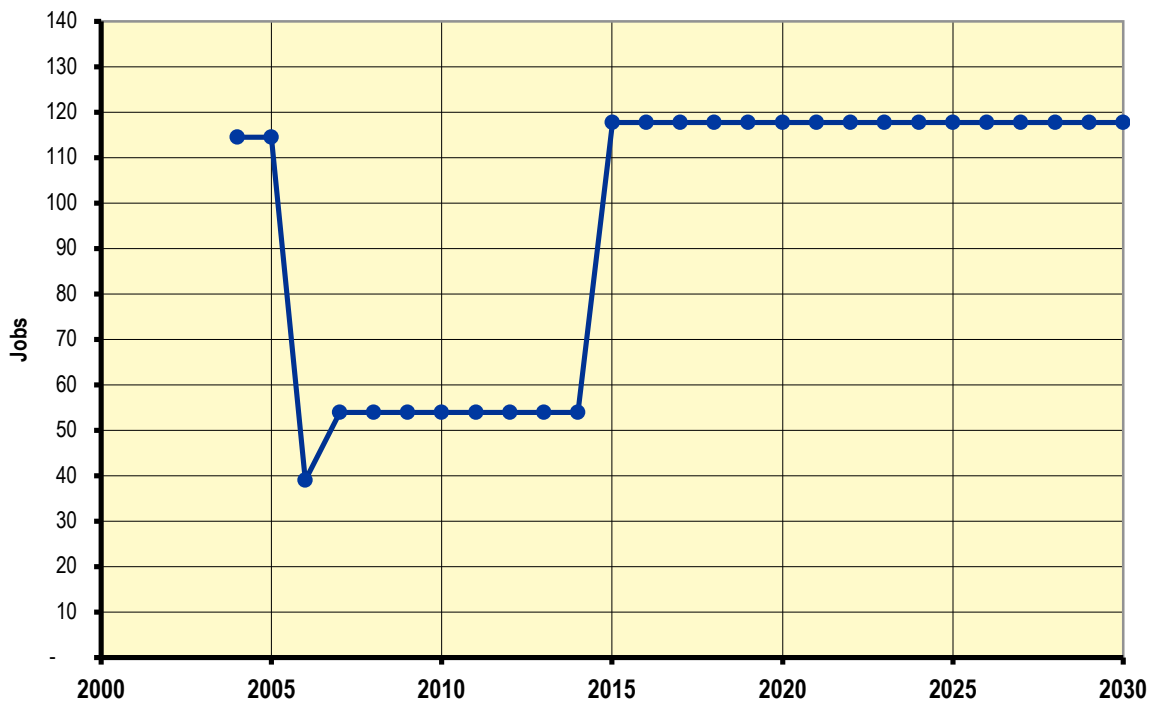


Figure 2-a. Maui Ethanol Project, Tax-Option 2: Net Economic Benefits and Fiscal Impact

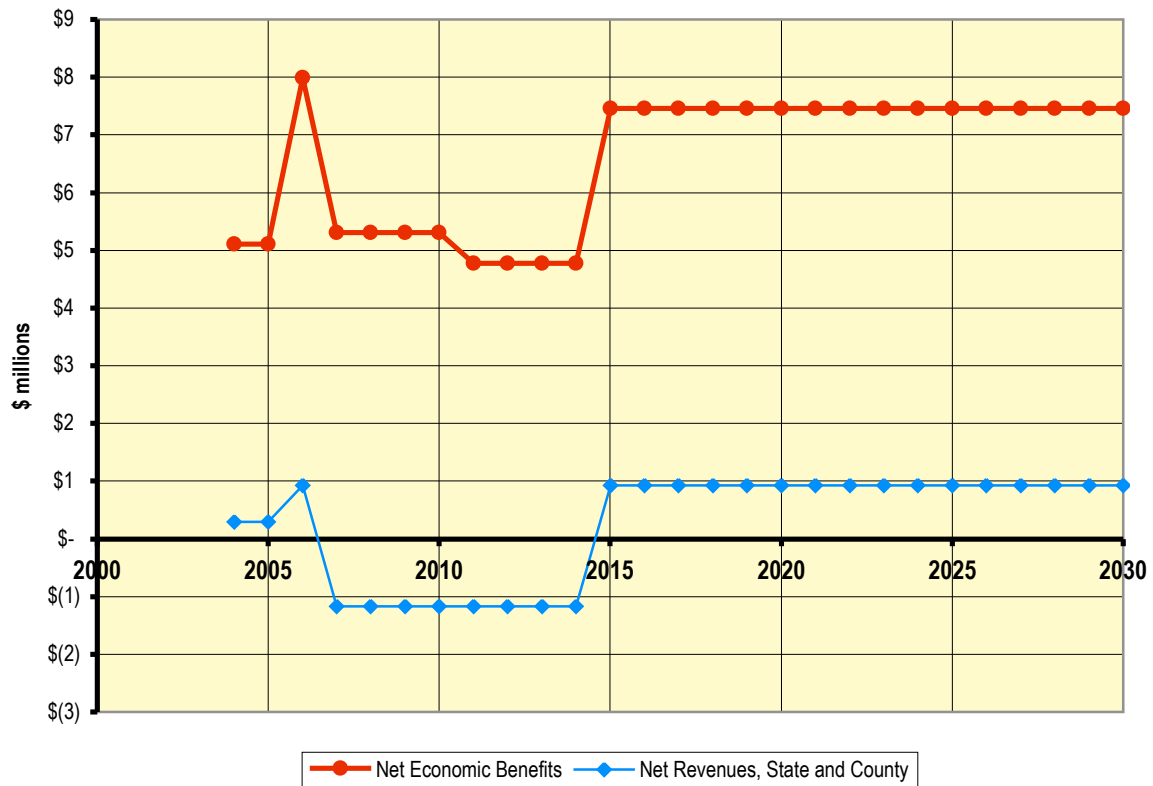


Figure 2-b. Maui Ethanol Project, Tax-Option 2: Impact on Employment

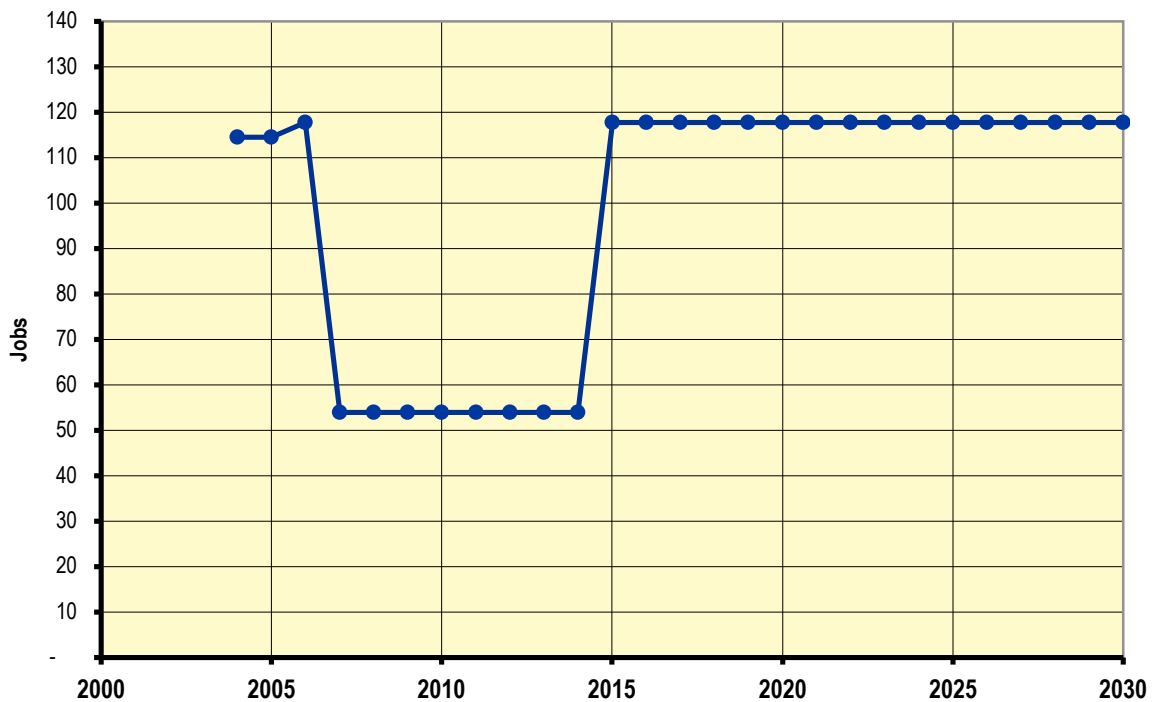


Figure 3-a. Maui Ethanol Project, Tax-Option 3: Net Economic Benefits and Fiscal Impact

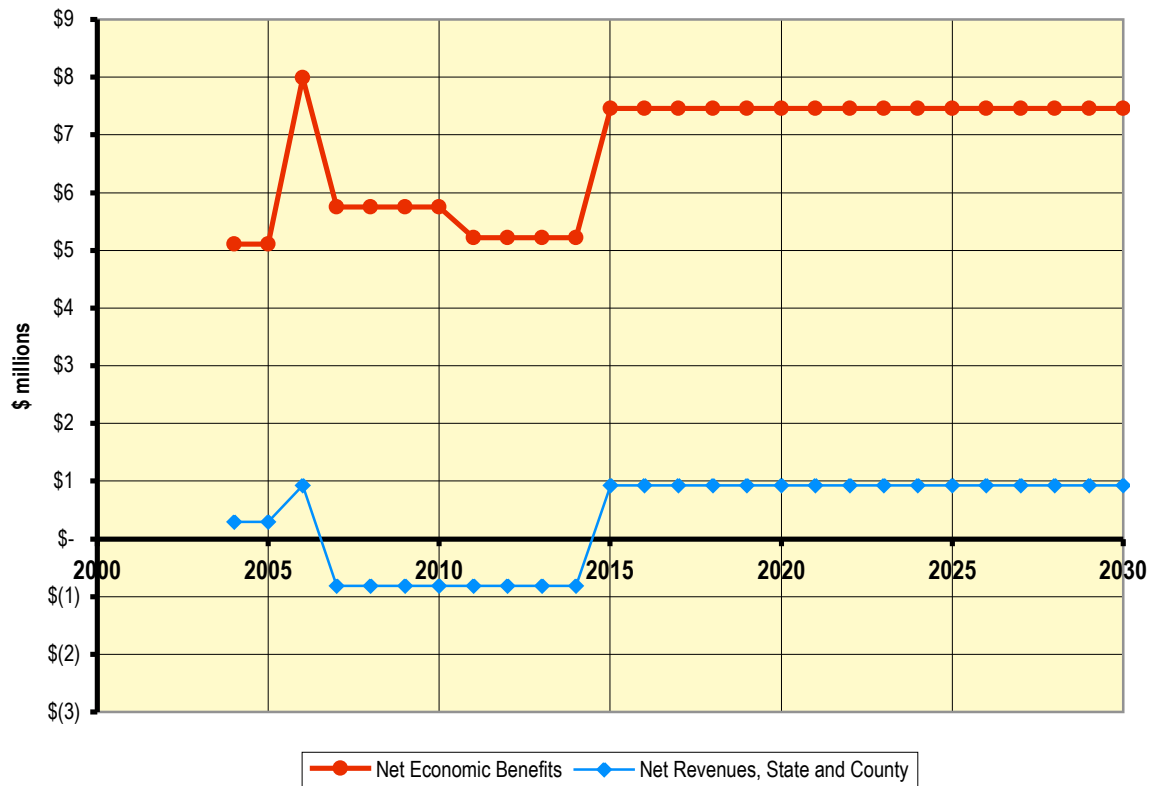


Figure 3-b. Maui Ethanol Project, Tax-Option 3: Impact on Employment

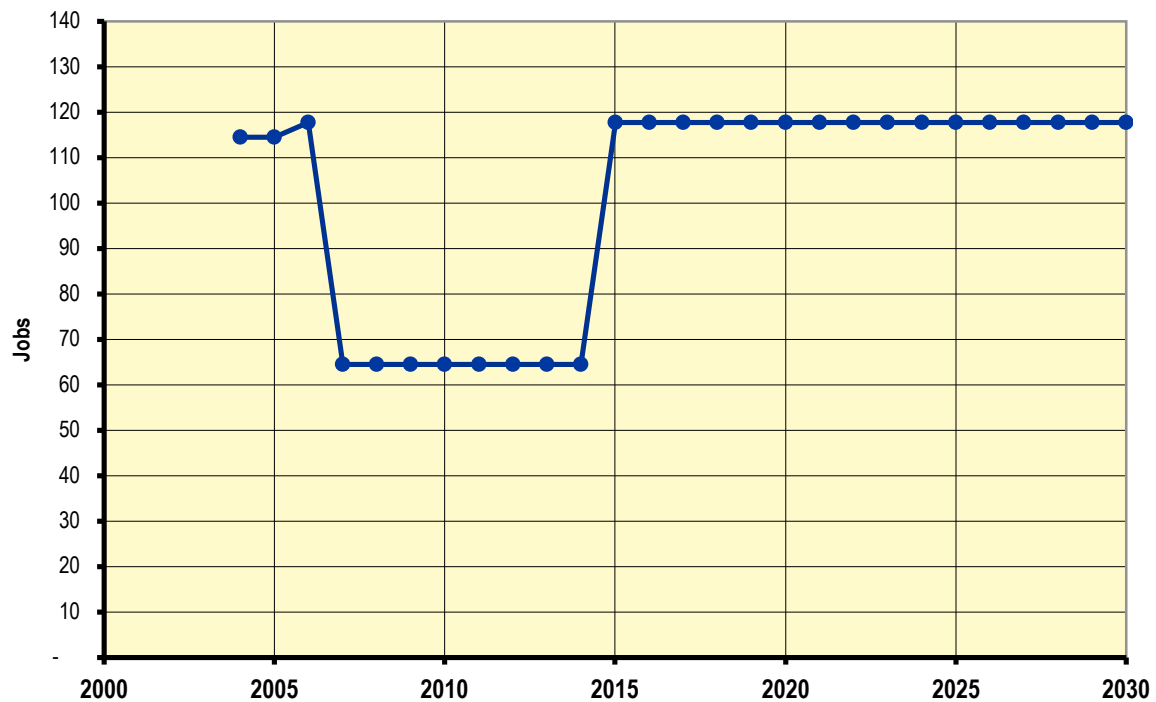


Figure 4-a. Maui Ethanol Project, Tax-Option 4: Net Economic Benefits and Fiscal Impact

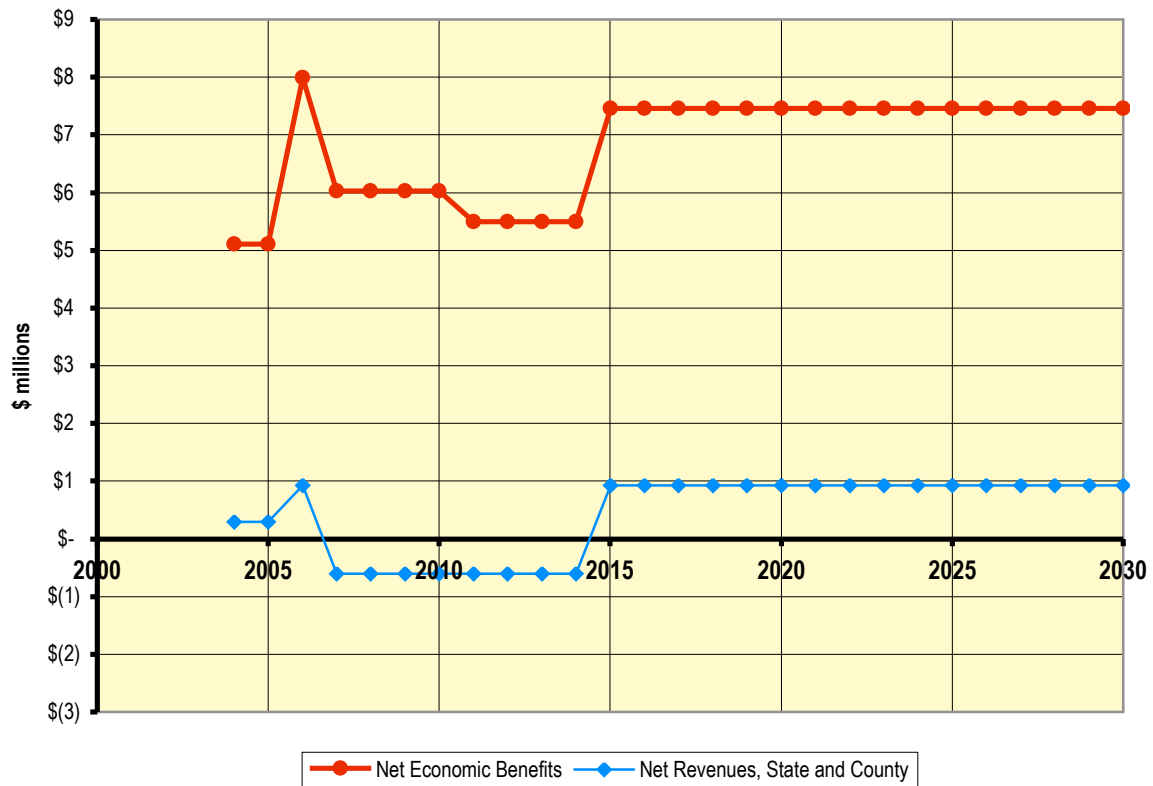
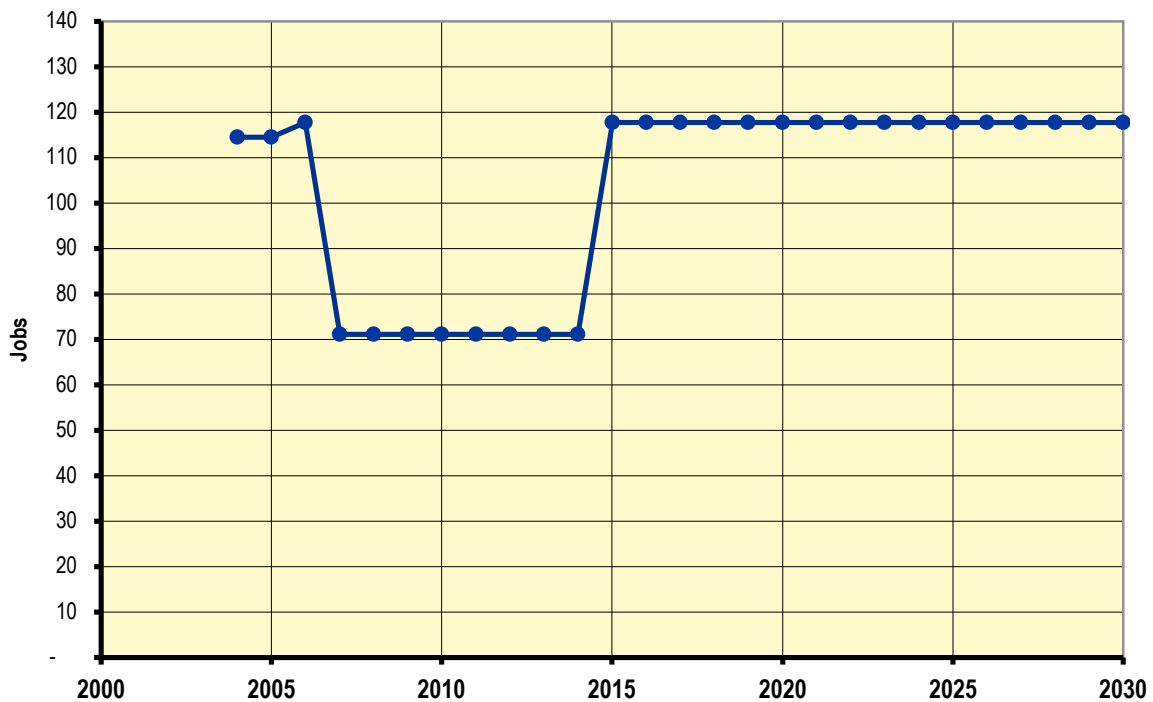


Figure 4-b. Maui Ethanol Project, Tax-Option 4: Impact on Employment



**Table 1. PROPOSED ETHANOL PROJECT ON MAUI:  
ECONOMIC AND FISCAL IMPACTS, BY OPTION**  
(2003 dollars)

Item	Present Value (at 3%)	Construction Phase	Operations				Units
			Phase A	Phase B	Phase C	Phase D	
<b>Period</b>							
From		2004	2006	2007	2011	2,015	year
To		2005	2006	2010	2014	2,030	"
Duration		2	1	4	4	16	years
<b>Tax-Incentive Option 1</b>							
Net Economic Benefits		\$ 5.11	\$ 7.60	\$ 5.31	\$ 4.77	\$ 7.46	million/yr
Present Value	\$ 116.9						million
Net Revenues, State and County		\$ 0.29	\$ (2.48)	\$ (1.17)	\$ (1.17)	\$ 0.93	million/yr
Present Value	\$ (0.8)						million
Net Employment		114	39	54	54	118	jobs
<b>Tax-Incentive Option 2</b>							
Net Economic Benefits		\$ 5.11	\$ 7.99	\$ 5.31	\$ 4.77	\$ 7.46	million/yr
Present Value	\$ 117.3						million
Net Revenues, State and County		\$ 0.29	\$ 0.93	\$ (1.17)	\$ (1.17)	\$ 0.93	million/yr
Present Value	\$ 1.8						million
Net Employment		114	118	54	54	118	jobs
<b>Tax-Incentive Option 3</b>							
Net Economic Benefits		\$ 5.11	\$ 7.99	\$ 5.75	\$ 5.22	\$ 7.46	million/yr
Present Value	\$ 120.2						million
Net Revenues, State and County		\$ 0.29	\$ 0.93	\$ (0.82)	\$ (0.82)	\$ 0.93	million/yr
Present Value	\$ 4.0						million
Net Employment		114	118	65	65	118	jobs
<b>Tax-Incentive Option 4</b>							
Net Economic Benefits		\$ 5.11	\$ 7.99	\$ 6.03	\$ 5.50	\$ 7.46	million/yr
Present Value	\$ 121.9						million
Net Revenues, State and County		\$ 0.29	\$ 0.93	\$ (0.60)	\$ (0.60)	\$ 0.93	million/yr
Present Value	\$ 5.3						million
Net Employment		114	118	71	71	118	jobs

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
ASSUMPTIONS								
Period								
From	2004	2006	2007	2011	2015	year		
To	2005	2006	2010	2014	2030	"		
Duration	2	1	4	4	16	years		
Tax Incentives								
State								
Ethanol Producer Tax Credit								
Nominal Rate on Capacity		pmt delayed	\$ 0.300	\$ 0.300	expired	per gallon		\$300,000 for each 1 million gallons in capacity (line 59)
Effective Rate on Production		1 year						Credit (line 131) ÷ production (line 60)
E10/Gasohol Excise Rate		\$ -	\$ 0.336	\$ 0.336	\$ -	"		Exemption from tax expires in 2006
Federal		0%	4%	4%	4%	of sales		
Ethanol Producer Tax Credit								
E10/Gasohol Fuel-Tax Exemption								
Fuel Prices and Taxes								
Gasoline								
Wholesale Price to Distributors, Regular		\$ 1.167	\$ 1.167	\$ 1.167	\$ 1.167	per gallon		Line 29 – line 28
Average Premium for All Grades		\$ 0.050	\$ 0.050	\$ 0.050	\$ 0.050	"		Assumed
Wholesale Price to Distributors, Average of All Grades		\$ 1.217	\$ 1.217	\$ 1.217	\$ 1.217	"		Line 33 – (line 31 + line 32)
Distribution Costs		\$ 0.200	\$ 0.200	\$ 0.200	\$ 0.200	"		Assumed
Excise Tax		\$ 0.059	\$ 0.059	\$ 0.059	\$ 0.059	"		4% of line 33
Wholesale Price after Excise Tax		\$ 1.476	\$ 1.476	\$ 1.476	\$ 1.476	"		Line 37 – fuel taxes
Federal Fuel Tax		\$ 0.184	\$ 0.184	\$ 0.184	\$ 0.184	"		18.4¢ per gallon
State Fuel Tax		\$ 0.160	\$ 0.160	\$ 0.160	\$ 0.160	"		16¢ per gallon
County Fuel Tax		\$ 0.180	\$ 0.180	\$ 0.180	\$ 0.180	"		18¢ per gallon
Retail Price		\$ 2.000	\$ 2.000	\$ 2.000	\$ 2.000	"		Assumed



**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
E10/Gasohol								
Wholesale Price to Distributors		\$ 1.287	\$ 1.228	\$ 1.228	\$ 1.228	per gallon		Line 42 – (line 40 + line 41)
Distribution Costs		\$ 0.200	\$ 0.200	\$ 0.200	\$ 0.200	"		Assumed
Excise Tax		\$ -	\$ 0.059	\$ 0.059	\$ 0.059	"		Line 21 x line 42
Wholesale Price, after Excise Tax		\$ 1.487	\$ 1.487	\$ 1.487	\$ 1.487	"		Line 46 – fuel taxes
Federal Fuel Tax		\$ 0.133	\$ 0.133	\$ 0.133	\$ 0.133	"		Line 34 – line 24
State Fuel Tax		\$ 0.160	\$ 0.160	\$ 0.160	\$ 0.160	"		Same as line 35
County Fuel Tax		\$ 0.180	\$ 0.180	\$ 0.180	\$ 0.180	"		Same as line 36
Retail Price		\$ 1.960	\$ 1.960	\$ 1.960	\$ 1.960	"		98% of line 37 to reflect lower mpg from E10
Prices to Ethanol Distributors								
Gasoline—90%								
Wholesale Price, Regular		\$ 1.167	\$ 1.167	\$ 1.167	\$ 1.167	"		Line 27
Special Processing for Ethanol Mix		\$ 0.005	\$ 0.005	\$ 0.005	\$ 0.005	"		Assumed
Adjusted Wholesale Price, Regular		\$ 1.172	\$ 1.172	\$ 1.172	\$ 1.172	"		Sum
Ethanol—10%								
Cost of Ethanol in Hawaii		\$ 1.350	\$ 1.350	\$ 1.350	\$ 1.350	"		Assumed; price of imported ethanol
Hawaii Premium to Distributors		\$ 0.972	\$ 0.378	\$ 0.378	\$ 0.378	"		Line 55 – line 53
Value to Distributors		\$ 2.322	\$ 1.728	\$ 1.728	\$ 1.728	"		Derived
E10/Gasohol Wholesale Price to Distributors		\$ 1.287	\$ 1.228	\$ 1.228	\$ 1.228	"		Line 39 = 90% of line 51 + 10% of line 55

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>Production and Fuel Sales</b>								
Maui Ethanol Plant								
Ethanol Capacity		7.25	7.25	7.25	7.25	million gallons/yr		Maui Ethanol LLC
Ethanol Production (86% of capacity)		6.25	6.25	6.25	6.25	"		"
Electricity Production for Sale		8.16	8.16	8.16	8.16	"		"
E10/Gasohol								
Gasoline—90%		56.23	56.23	56.23	56.23	"		Line 65 – line 64
Ethanol—10%		6.25	6.25	6.25	6.25	"		Line 60
E10/Gasohol		62.48	62.48	62.48	62.48	"		10 x line 64
Displaced Gasoline		(61.23)	(61.23)	(61.23)	(61.23)	"		98% of line 65 to reflect higher mpg from gasoline
Net Change in Fuel Sales		1.25	1.25	1.25	1.25	"		Line 65 - line 66
Gasoline and Naptha Sales								
Excess Supply of Gasoline		(5.00)	(5.00)	(5.00)	(5.00)	"		Line 63 - line 66
Sale of Naptha to Ethanol Producer		2.50	2.50	2.50	2.50	"		50% of line 69, estimated by Maui Ethanol LLC
Net Change in Gasoline/Naptha Sales		(2.50)	(2.50)	(2.50)	(2.50)	"		Sum
Consumer Expenditures on Fuel								
E10/Gasohol Sales		\$ 122.45	\$ 122.45	\$ 122.45	\$ 122.45	million per year		Line 46 x line 65
Gasoline Sales		\$ (122.45)	\$ (122.45)	\$ (122.45)	\$ (122.45)	"		Line 37 x line 66
Net Change		\$ -	\$ -	\$ -	\$ -	"		Sum

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>CONSTRUCTION ACTIVITY</b>								
Duration of Construction	2					years		Maui Ethanol LLC
<b>Development Costs</b>								
Ethanol Plant								
Land	\$ 0.70					million		Maui Ethanol LLC
Facility Construction	\$ 11.43					"		"
Construction Financing	\$ 0.85					"		"
Rolling Stock, Tools, Supplies, etc.	\$ 1.06					"		"
Total Development Costs	\$ 14.04							Sum
Ethanol Storage Facilities, Distributors	\$ 0.50							Maui Ethanol LLC
Total Development Costs	\$ 14.54					"		Sum
<b>Revenues and Sales, Annual Average</b>								
Construction Expenditures/Revenues	\$ 5.96					million per year	4% excise	(Lines 81 + line 85) ÷ line 77
Indirect Sales Related to Consumption by Employees	\$ 2.16					"	4% excise	Line 101
Other Indirect Sales	\$ 4.22					"	0.5% excise	Residual
Total Revenues and Sales	\$ 12.34					"		2.07 x line 88, based on DBEDT multipliers
<b>Profit Reported in Hawai'i</b>	\$ 0.62					million per year	Corp Income	5% of line 91
<b>Employment</b>								
Construction Employment	48					jobs		Line 96 ÷ 2.40, based on DBEDT multipliers
Indirect Employment	67					"		Residual
Total Employment	114					"		19.2 x line 88, based on DBEDT multipliers
<b>Payroll</b>								
Construction Payroll	\$ 2.40					million per year		\$50,300 x line 94, based on DLIR data
Payroll for Indirect Employment	\$ 1.92					"		\$28,800 x line 95, based on DLIR data
Total Payroll	\$ 4.32					"	Pers Income	Sum
<b>Consumption Expenditures by Employees</b>	\$ 2.16					million per year		50% of line 100, based on DBEDT data
<b>Residents Supported by New Jobs</b>	212					residents		1.85 x line 96, based on U.S. census data

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>Fiscal Impact, State</b>								
Tax Revenues						million per year		
Excise Taxes at 4%, Construction Expenditures	\$ 0.24							4% of line 88
Excise Taxes at 4%, Consumption Expenditures	\$ 0.09							4% of line 89
Excise Taxes at 0.5%	\$ 0.02					"		0.5% of line 90
Income Taxes, Corporate	\$ 0.04					"		6.4% of line 92
Income Taxes, Personal	\$ 0.18					"		4.2% of line 100
Other Taxes	\$ 0.65					"		\$3,050 per resident x line 102
Total State Tax Revenues	\$ 1.21					"		Sum
Support Expenditures	\$ (0.92)					"		\$4,365 per resident x line 102
Net Revenues	\$ 0.29					"		Line 111 – line 112
<b>Economic Benefits</b>								
Payroll	\$ 4.32					million per year		Line 100
Profits Remaining in Hawaii	\$ 0.52					"		85% of line 92
Excise Taxes on Business Transactions	\$ 0.26					"		Lines 105 and 107
Total Economic Benefits	\$ 5.11					"		Sum; excludes other taxes to avoid double-counting of benefits

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>ETHANOL PLANT OPERATIONS</b>								
<b>Operations</b>								
Capacity, Ethanol Production		7.25	7.25	7.25	7.25	million gallons/yr		Line 59
Outputs								
Ethanol Production (86% of capacity)		6.25	6.25	6.25	6.25	"		Line 60
Electricity Production for Sales		8.16	8.16	8.16	8.16	million kWhr/yr		Line 61
Major Input: Molasses		83,800	83,800	83,800	83,800	tons per year		Maui Ethanol LLC
<b>Increased Revenues and Sales</b>								
Ethanol Operations								
Ethanol Sales		\$ 8.43	\$ 8.43	\$ 8.43	\$ 8.43	million per year	0.5% excise	Line 53 x line 124
Electricity Sales		\$ 0.78	\$ 0.78	\$ 0.78	\$ 0.78	"	"	\$0.095 per kWhr x line 125
State Ethanol-Producer Tax Credit		\$ -	\$ 2.10	\$ 2.10	\$ -	"		Line 20 x line 124
Total Revenues, Ethanol Plant		\$ 9.21	\$ 11.31	\$ 11.31	\$ 9.21	"		Sum
Indirect Sales								
Plant Purchase of Molasses		\$ 4.19	\$ 4.19	\$ 4.19	\$ 4.19	"	0.5% excise	\$50 per ton x line 126
Adjustment for Existing Molasses Production		\$ (4.19)	\$ (4.19)	\$ (4.19)	\$ (4.19)	"	"	Line 134
Plant Purchase of Other Goods and Services		\$ 3.67	\$ 3.67	\$ 3.67	\$ 3.67	"	"	Maui Ethanol LLC
Consumption Purchases by Employees		\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	"	4% excise	Line 154
Other Indirect Sales		\$ 2.70	\$ 2.70	\$ 2.70	\$ 2.70	"	0.5% excise	Based on DBEDT multipliers applied to purchases
Total Indirect Sales		\$ 7.50	\$ 7.50	\$ 7.50	\$ 7.50	"		Sum
Total Increase in Revenues and Sales		\$ 16.71	\$ 18.81	\$ 18.81	\$ 16.71	"		Line 132 + line 139
<b>Profit Reported in Hawai'i</b>								
Profit from Increased Revenues and Sales		\$ 0.67	\$ 0.75	\$ 0.75	\$ 0.67	million per year		4% of line 140
Profit from Higher Returns to Molasses Producer		\$ 0.84	\$ 0.84	\$ 0.84	\$ 0.84	"		\$10 per ton x line 126
Total Profit		\$ 1.51	\$ 1.59	\$ 1.59	\$ 1.51	"	Corp Income	4% of line 140
<b>Employment</b>								
Operating Employment		20	20	20	20	jobs		Maui Ethanol LLC
Indirect Employment (excluding existing jobs related to molasses)		52	52	52	52	"		Based on DBEDT multipliers applied to purchases
Total Employment		72	72	72	72	jobs		Sum
<b>Payroll</b>								
Payroll for Operating Employment		\$ 0.77	\$ 0.77	\$ 0.77	\$ 0.77	million per year		\$38,700 x line 146, based on DLIR data
Payroll for Indirect Employment		\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	"		\$28,800 x line 147, based on DLIR data
Total Payroll		\$ 2.27	\$ 2.27	\$ 2.27	\$ 2.27	"	Pers Income	Sum
<b>Consumption Expenditures by Employees</b>		\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	million per year		50% of line 153, based on DBEDT data
<b>Residents Supported by New Jobs</b>		133	133	133	133	residents		1.85 x line 149, based on U.S. census data

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>Fiscal Impact, State and County</b>								
Tax Revenues, State						million per year		4% of line 137
Excise Taxes at 4%		\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	"		0.5% of lines 129, 130 and 138
Excise Taxes at 0.5%		\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	"		6.4% of line 144
Income Taxes, Corporate		\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.10	"		4.2% of line 153
Income Taxes, Personal		\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.10	"		\$3,050 per resident x line 155
Other Taxes		\$ 0.41	\$ 0.41	\$ 0.41	\$ 0.41	"		Sum
Total State Tax Revenues		\$ 0.70	\$ 0.71	\$ 0.71	\$ 0.70	"		\$4,365 per resident x line 155
Support Expenditures		\$ (0.58)	\$ (0.58)	\$ (0.58)	\$ (0.58)	"		Line 163 – line 164
Net Revenues, State		\$ 0.12	\$ 0.13	\$ 0.13	\$ 0.12	"		\$6.50 per \$1,000 x lines 80, 81 and 82
Property Tax Revenues, County		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	"		Line 165 + line 166
Net Revenues, State and County		\$ 0.21	\$ 0.21	\$ 0.21	\$ 0.21	"		
<b>Economic Benefits</b>								
State Ethanol-Producer Tax Credit						million per year		Line 131
Cost to State		\$ -	\$ (2.10)	\$ (2.10)	\$ -	"		The credit is an operating subsidy; see line 131
Direct Benefit to Owners in Hawaii		\$ -	\$ -	\$ -	\$ -	"		
State Ethanol-Producer Tax Credit						"		85% of line 23 x line 60
Direct Benefit to Owners in Hawaii		\$ 0.53	\$ 0.53	\$ -	\$ -	"		Line 153
Payroll		\$ 2.27	\$ 2.27	\$ 2.27	\$ 2.27	"		85% of line 144
Profits Remaining in Hawaii		\$ 1.28	\$ 1.35	\$ 1.35	\$ 1.28	"		Lines 159
Excise Taxes at 0.5%		\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	"		Line 166
Property Tax		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	"		Sum; excludes other taxes to avoid double-counting of benefits
Total Economic Benefits		\$ 4.23	\$ 2.20	\$ 1.67	\$ 3.70	"		

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>REFINERY OPERATIONS</b>								
<b>Change in Production</b>		-	-	-	-			No significant change
<b>Diversion of Gasoline Production to Exports</b>		(2.50)	(2.50)	(2.50)	(2.50)	million gallons/yr		Line 71
<b>Sales</b>								
Direct (export of excess gasoline)		\$ (0.25)	\$ (0.25)	\$ (0.25)	\$ (0.25)	million per year	0.5% excise	10¢ less per gallon shipping x line 182
Indirect		\$ -	\$ -	\$ -	\$ -	"		No significant change
Total		\$ (0.25)	\$ (0.25)	\$ (0.25)	\$ (0.25)	"		Sum
<b>Profit Reported in Hawai'i</b>		\$ -	\$ -	\$ -	\$ -	million per year		No significant change
<b>Employment</b>		-	-	-	-	jobs		No significant change
<b>Payroll</b>		\$ -	\$ -	\$ -	\$ -			No significant change
<b>Consumption Expenditures by Employees</b>		\$ -	\$ -	\$ -	\$ -	million per year		No significant change
<b>Residents Supported by New Jobs</b>		-	-	-	-	million per year		No significant change
<b>Fiscal Impact, State</b>								
Excise Taxes at 0.5%		\$ (0.00)	\$ (0.00)	\$ (0.00)	\$ (0.00)	million per year		0.5% of line 184
Other Taxes		\$ -	\$ -	\$ -	\$ -	"		No significant change
Net Revenues		\$ (0.00)	\$ (0.00)	\$ (0.00)	\$ (0.00)	"		Sum
<b>Economic Benefits Remaining in Hawaii</b>		\$ -	\$ -	\$ -	\$ -			No significant change

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>FUEL DISTRIBUTION + ETHANOL PREMIUM</b>								
<b>Increase in Fuel Sales</b>		1.25	1.25	1.25	1.25	million gallons/yr	Fuel	Line 67
<b>Increase in Revenues and Sales</b>								
Distribution								
Increase in Net Revenues to Distributors		\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	million per year		20¢ per gallon for distribution x line 198
Indirect Sales, Consumption by Employees		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	"	4% excise	Line 228
Other Indirect Sales		\$ 0.18	\$ 0.18	\$ 0.18	\$ 0.18	"	0.5% excise	Residual
Total Direct and Indirect Sales, Distribution		\$ 0.52	\$ 0.52	\$ 0.52	\$ 0.52	"		2.07 x line 201, based on DBEDT multipliers
Expenditure of Ethanol Premium								
Premium Spent on Consumption		\$ 3.04	\$ 1.18	\$ 1.18	\$ 1.18	"	4% excise	50% of line 213
Indirect Sales, Consumption by Employees		\$ 0.81	\$ 0.31	\$ 0.31	\$ 0.31	"	4% excise	Line 229
Other Indirect Sales		\$ 1.56	\$ 0.61	\$ 0.61	\$ 0.61	"	0.5% excise	Residual
Total Direct and Indirect Sales, Ethanol Premium		\$ 5.41	\$ 2.10	\$ 2.10	\$ 2.10	"		1.78 x line 206, based on DBEDT multipliers
Total Increase in Economic Activity		\$ 5.92	\$ 2.62	\$ 2.62	\$ 2.62	"		Line 204 + line 209
<b>Profit Reported in Hawai'i</b>								
Operations		\$ 0.30	\$ 0.13	\$ 0.13	\$ 0.13	million per year		5% of line 210
Ethanol Premium		\$ 6.07	\$ 2.36	\$ 2.36	\$ 2.36	"		Line 54 x line 60
Total Profit		\$ 6.37	\$ 2.49	\$ 2.49	\$ 2.49	"	Corp Income	Sum
<b>Employment</b>								
Distribution Activity								
Operating Employment		2.8	2.8	2.8	2.8	jobs		Line 219 ÷ 1.95, based on DBEDT multipliers
Indirect Employment		2.6	2.6	2.6	2.6	"		Residual
Total Direct and Indirect Employment, Distribution		5	5	5	5	"		21.5 x line 201, based on DBEDT multipliers
Employment, Expenditure of Ethanol Premium		56	22	22	22	"		18.44 x line 206, based on DBEDT multipliers
Total Employment		61	27	27	27	"		Line 219 + line 220
<b>Payroll</b>								
Payroll, Operating Employment		\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.10	million per year		\$35,600 x line 217, based on DLIR data
Payroll, Indirect Employment Related to Operations		\$ 0.08	\$ 0.08	\$ 0.08	\$ 0.08	"		\$28,800 x line 218, based on DLIR data
Payroll, Employment Related to Ethanol Premium		\$ 1.61	\$ 0.63	\$ 0.63	\$ 0.63	"		\$28,800 x line 220, based on DLIR data
Total Payroll		\$ 1.79	\$ 0.80	\$ 0.80	\$ 0.80	"	Pers Income	Sum
<b>Consumption Expenditures by Employees</b>								
Consumption Related to Operations		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	million per year		50% of lines 223 and 224, based on DBEDT data
Consumption Related to Ethanol Premium		\$ 0.81	\$ 0.31	\$ 0.31	\$ 0.31	"		50% of line 225, based on DBEDT data
Total Consumption Expenditures by Employees		\$ 0.89	\$ 0.40	\$ 0.40	\$ 0.40	"		Sum
<b>Residents Supported by New Jobs</b>		114	50	50	50	residents		1.85 x line 221



**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>Fiscal Impact, State</b>								
Revenues								
Excise Taxes at 4%		\$ 0.16	\$ 0.06	\$ 0.06	\$ 0.06	million per year		4% of lines 202, 206 and 207
Excise Taxes at 0.5%		\$ 0.01	\$ 0.00	\$ 0.00	\$ 0.00	"		0.5% of lines 203 and 208
Income Taxes, Corporate		\$ 0.41	\$ 0.16	\$ 0.16	\$ 0.16	"		6.4% of line 214
Income Taxes, Personal		\$ 0.08	\$ 0.03	\$ 0.03	\$ 0.03	"		4.2% of line 226
Other Taxes		\$ 0.35	\$ 0.15	\$ 0.15	\$ 0.15	"		\$3,050 per resident x line 231
Total State Tax Revenues		\$ 1.00	\$ 0.41	\$ 0.41	\$ 0.41	"		Sum
Support Expenditures		\$ (0.50)	\$ (0.22)	\$ (0.22)	\$ (0.22)	"		\$4,365 per resident x line 231
Net Revenues, State		\$ 0.50	\$ 0.19	\$ 0.19	\$ 0.19	"		Line 239 - line 240
<b>Taxes on Fuel</b>								
State Excise Tax on E10/Gasohol		\$ -	\$ 3.72	\$ 3.72	\$ 3.72	million per year		Line 41 x line 69
Avoided Excise Tax on Gasoline		\$ (3.61)	\$ (3.61)	\$ (3.61)	\$ (3.61)	"		Line 32 x line 66
State Fuel Tax		\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	"		16¢ x line 198
County Fuel Tax		\$ 0.22	\$ 0.22	\$ 0.22	\$ 0.22	"		18¢ x line 198
Total Taxes on Fuel		\$ (3.19)	\$ 0.53	\$ 0.53	\$ 0.53	"		Sum
<b>Economic Benefits</b>								
Payroll		\$ 1.79	\$ 0.80	\$ 0.80	\$ 0.80	million per year		Line 226
Profits Remaining in Hawaii		\$ 5.73	\$ 2.24	\$ 2.24	\$ 2.24	"		90% of line 214
Excise Taxes at 0.5%		\$ 0.01	\$ 0.00	\$ 0.00	\$ 0.00	"		Line 235
Taxes on Fuel		\$ (3.19)	\$ 0.53	\$ 0.53	\$ 0.53	"		Line 247
Total Economic Benefits		\$ 4.34	\$ 3.57	\$ 3.57	\$ 3.57	"		Sum; excludes other taxes to avoid double-counting of benefits

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>GOVERNMENT OPERATIONS</b>								
<b>Initial Change in Government Operations</b>								
State Ethanol-Producer Tax Credit		\$ -	\$ (2.10)	\$ (2.10)	\$ -	million per year		Line 131
Taxes on Fuel		\$ (3.19)	\$ 0.53	\$ 0.53	\$ 0.53	"		Line 247
County Property Taxes		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	"		Line 166
Total Change		\$ (3.10)	\$ (1.49)	\$ (1.49)	\$ 0.61	"		Sum; excludes other taxes to avoid double-counting of benefits
<b>Revenues and Sales</b>								
Initial Change in State Operations		\$ (3.10)	\$ (1.49)	\$ (1.49)	\$ 0.61	million per year		Line 260
Indirect Sales Related to Consumption by Employees		\$ (1.49)	\$ (0.71)	\$ (0.71)	\$ 0.29	"	4% excise	Line 276
Other Indirect Sales Generated by Gov. Operations		\$ (1.15)	\$ (0.55)	\$ (0.55)	\$ 0.23	"	0.5% excise	Residual
Total Change in Economic Activity		\$ (5.74)	\$ (2.75)	\$ (2.75)	\$ 1.14	"		1.85 x line 263, based on DBEDT multipliers
<b>Profit Reported in Hawai'i</b>		\$ (0.13)	\$ (0.06)	\$ (0.06)	\$ 0.03	million per year	Corp Income	5% of lines 264 and 265
<b>Employment</b>								
Government Employment		(67)	(32)	(32)	13	jobs		Line 271 ÷ 1.41, based on DBEDT multipliers
Indirect Employment		(27)	(13)	(13)	5	"		Residual
Total Employment		(94)	(45)	(45)	19	"		30.4 x line 263, based on DBEDT multipliers
<b>Payroll</b>								
Government Payroll		\$ (2.12)	\$ (1.02)	\$ (1.02)	\$ 0.42	million per year		\$31,700 x line 269, based on DLIR data
Payroll for Indirect Employment		\$ (0.86)	\$ (0.41)	\$ (0.41)	\$ 0.17	"		\$31,200 x line 270, based on DLIR data
Total Payroll		\$ (2.98)	\$ (1.43)	\$ (1.43)	\$ 0.59	"	Pers Income	Sum
<b>Consumption Expenditures by Employees</b>		\$ (1.49)	\$ (0.71)	\$ (0.71)	\$ 0.29	million per year		50% of line 275, based on DBEDT data
<b>Residents Supported by New Jobs</b>		(185)	(89)	(89)	37	residents		1.96 x line 271, based on U.S. census data
<b>Fiscal Impact, State</b>								
Revenues								
Excise Taxes at 4%		\$ (0.06)	\$ (0.03)	\$ (0.03)	\$ 0.01	million per year		4% of line 264
Excise Taxes at 0.5%		\$ (0.01)	\$ (0.00)	\$ (0.00)	\$ 0.00	"		0.5% of line 265
Income Taxes, Corporate		\$ (0.01)	\$ (0.00)	\$ (0.00)	\$ 0.00	"		6.4% of line 267
Income Taxes, Personal		\$ (0.12)	\$ (0.06)	\$ (0.06)	\$ 0.02	"		4.2% of line 275
Other Taxes		\$ (0.56)	\$ (0.27)	\$ (0.27)	\$ 0.11	"		\$3,050 per resident x line 277
Total State Tax Revenues		\$ (0.76)	\$ (0.37)	\$ (0.37)	\$ 0.15	"		Sum
Support Expenditures		\$ 0.81	\$ 0.39	\$ 0.39	\$ (0.16)	"		\$4,365 per resident x line 277
Net Revenues, State		\$ 0.04	\$ 0.02	\$ 0.02	\$ (0.01)	"		Line 285 - line 286

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>Economic Benefits</b>								
Payroll for Indirect Employment		\$ (0.86)	\$ (0.41)	\$ (0.41)	\$ 0.17	million per year		Line 274; excludes government payroll to avoid double-counting of benefits
Profits Remaining in Hawaii		\$ (0.11)	\$ (0.05)	\$ (0.05)	\$ 0.02	"		85% of line 267
Excise Taxes at 0.5%		\$ (0.01)	\$ (0.00)	\$ (0.00)	\$ 0.00	"		Line 281
Total Economic Benefits		\$ (0.97)	\$ (0.47)	\$ (0.47)	\$ 0.19	"		Sum; excludes other taxes to avoid double-counting of benefits

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
<b>SUMMARY OF ECONOMIC AND FISCAL IMPACTS</b>								
<b>Net Change in Economic Activity</b>								
Revenues and Sales								
Direct Revenues and Sales:								
Construction Expenditures/Revenues	\$ 5.96					million per year		Line 88
Ethanol Plant, Ethanol and Electrical Sales		\$ 9.21	\$ 9.21	\$ 9.21	\$ 9.21	"		Line 129 + line 130
Refinery Operations		\$ (0.25)	\$ (0.25)	\$ (0.25)	\$ (0.25)	"		Line 184
Fuel Distribution		\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	"		Line 201
Government Operations		\$ (3.10)	\$ (1.49)	\$ (1.49)	\$ 0.61	"		Line 263
Indirect Sales Generated by:								
Construction Activity	\$ 6.38					"		Line 89 + line 90
Ethanol Plant Operations		\$ 7.50	\$ 7.50	\$ 7.50	\$ 7.50	"		Line 139
Refinery Operations		\$ -	\$ -	\$ -	\$ -	"		Line 185
Fuel Distribution + Ethanol Premium		\$ 5.67	\$ 2.37	\$ 2.37	\$ 2.37	"		Lines 202, 203 and 209
Government Operations		\$ (2.64)	\$ (1.26)	\$ (1.26)	\$ 0.52	"		Line 264 + line 265
Net Change in Sales and Expenditures	\$ 12.34	\$ 16.65	\$ 16.33	\$ 16.33	\$ 20.22	"		Sum
Employment (annual average)								
Direct Jobs Provided by:								
Construction Activity	48					jobs		Line 94
Ethanol Plant Operations		20	20	20	20	"		Line 146
Refinery Operations		-	-	-	-	"		Line 188
Fuel Distribution		3	3	3	3	"		Line 217
Government Operations		(67)	(32)	(32)	13	"		Line 269
Indirect Jobs Generated by:								
Construction Activity	67					"		Line 95
Ethanol Plant Operations		52	52	52	52	"		Line 147
Refinery Operations		-	-	-	-	"		Line 188
Fuel Distribution + Ethanol Premium		59	24	24	24	"		Line 218 + line 220
Government Operations		(27)	(13)	(13)	5	"		Line 270
Net Change in Employment	114	39	54	54	118	"		Sum

**Appendix Table A-1. PROPOSED ETHANOL PROJECT ON MAUI,  
TAX-INCENTIVE OPTION 1: ECONOMIC AND FISCAL IMPACTS**  
(2003 dollars)

Item	Construction and Related Activities	Operations and Related Activities, by Tax Incentives				Units	Tax Exposure	Source/Calculation/Comment
		Incentive Combo A	Incentive Combo B	Incentive Combo C	Incentive Combo D			
Payroll, Before Taxes (\$ million per year)								
Direct Payroll Provided by:								
Construction Activity	\$ 2.40					million per year		Line 98
Ethanol Plant Operations		\$ 0.77	\$ 0.77	\$ 0.77	\$ 0.77	"		Line 151
Refinery Operations		\$ -	\$ -	\$ -	\$ -	"		Line 189
Fuel Distribution		\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.10	"		Line 223
Government Operations		\$ (2.12)	\$ (1.02)	\$ (1.02)	\$ 0.42	"		Line 273
Indirect Payroll Generated by:								
Construction Activity	\$ 1.92					"		Line 99
Ethanol Plant Operations		\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	"		Line 152
Refinery Operations		\$ -	\$ -	\$ -	\$ -	"		Line 189
Fuel Distribution + Ethanol Premium		\$ 1.69	\$ 0.70	\$ 0.70	\$ 0.70	"		Line 224 + line 225
Government Operations		\$ (0.86)	\$ (0.41)	\$ (0.41)	\$ 0.17	"		Line 274
Net Change in Payroll, Before Taxes	\$ 4.32	\$ 1.08	\$ 1.65	\$ 1.65	\$ 3.66	million per year		Sum
<b>Fiscal Impacts</b>								
State								
Ethanol Producer Credit		\$ -	\$ (2.10)	\$ (2.10)	\$ -	million per year		Line 257
Excise Tax on Fuel		\$ (3.61)	\$ 0.10	\$ 0.10	\$ 0.10	"		Line 243 + line 244
Fuel Tax		\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	"		Line 245
Other Taxes Less Support Expenditures								
Construction and Related Activity	\$ 0.29					"		Line 113
Ethanol Plant Operations and Related Activity		\$ 0.12	\$ 0.13	\$ 0.13	\$ 0.12	"		Line 165
Refinery Operations and Related Activity		\$ (0.00)	\$ (0.00)	\$ (0.00)	\$ (0.00)	"		Line 195
Fuel Distribution and Related Activity		\$ 0.50	\$ 0.19	\$ 0.19	\$ 0.19	"		Line 241
Government Operations and Related Activity		\$ -	\$ -	\$ -	\$ -	"		Line 288
Total State Fiscal Impact	\$ 0.29	\$ (2.80)	\$ (1.48)	\$ (1.48)	\$ 0.62	"		Sum
County								
Property Tax		\$ 0.09	\$ 0.09	\$ 0.09	\$ 0.09	"		Line 166
Fuel Tax		\$ 0.22	\$ 0.22	\$ 0.22	\$ 0.22	"		Line 246
Total County Fiscal Impact	\$ -	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	"		Sum
Net Fiscal Impact	\$ 0.29	\$ (2.48)	\$ (1.17)	\$ (1.17)	\$ 0.93	"		Line 350 + line 354
<b>Economic Benefits</b>								
Construction and Related Activity	\$ 5.11					million per year		Line 118
Ethanol Plant Operations and Related Activity		\$ 4.23	\$ 2.20	\$ 1.67	\$ 3.70	"		Line 178
Refinery Operations and Related Activity		\$ -	\$ -	\$ -	\$ -	"		Line 196
Fuel Distribution and Related Activity		\$ 4.34	\$ 3.57	\$ 3.57	\$ 3.57	"		Line 253
Government Operations and Related Activity		\$ (0.97)	\$ (0.47)	\$ (0.47)	\$ 0.19	"		Line 293
Net Economic Benefits	\$ 5.11	\$ 7.60	\$ 5.31	\$ 4.77	\$ 7.46	"		Sum